

TO STUDY DIFFERENT MARKETING CHANNELS, MARKETING EFFICIENCY AND PROBLEM /CONSTRAINTS IN VEGETABLE MARKETING IN VARANASI DISTRICT OF UTTAR PRADESH

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ABSTRACT

Vegetable based industries are the engine for economic growth and employment generation in rural areas, and they lay a solid foundation for the development of managerial capacity in the young and emerging entrepreneurs. The present share of Uttar Pradesh in total horticulture production of the country is approximately 26%. U.P. ranks third in fruits, second in vegetable and first in potato production among all states. The major vegetables grown in the Varanasi district are potato, onion, tomato, cabbage, cauliflower, brinjal, etc. . An efficient marketing system ensures higher levels of income for the farmers and widens the markets for the produce by taking them to remote corners of the country. The intermediaries stored to various malpractices which aggravated the marketing problems, such as high commission charges, unauthorized deductions and lack of remunerative price for the produce, ultimately leading to increased price spread and reduced share of the product in consumer's rupee.methodology. The most common marketing channels engaged in the marketing of vegetables in Varanasi district are following:Producers-consumers, Producers-retailers-consumers,Producers-wholesalers-retailers-consumers, Producers-commission agent/arhatiya-retailers-consumers. Methods used are- Absolute margin, Percentage margins, Price spread, Marketing efficiency ,Marketing Efficiency, Marketable Surplus, Marketed Surplus, Marketing Cost, the absolute margin of the middlemen, Marketing efficiency, Gareette's ranking for constraints. The total marketing cost and marketing margin involved in channel-I was Rs.100, Rs.466.42 in channel-II, Rs.731.19 in channel-III and Rs.154 in channel-IV. Since the marketing cost and marketing margin in channel-III was higher, the marketing efficiency was very low for channel-III. Major problems faced by farmers was fluctuation in market prices, Failing in assessment of demand, lack of storage facilities, high cost of labour, lack of grading and packaging, high cost of transportation facility, high cost of pesticides and hence they expected that no malpractices should be followed at selling unit with proper regulation in the market, Good transportation facility, Good packing facility, Good storage facility. The major problems faced by wholesalers were fluctuation in market prices, failing in assessment of demand, Timely supply, lack of financial assistance from any company and hence they expected Providing financial assistance from companies should be followed by buyers with proper regulation in the market. The major problems the retail outlet in the vegetable supply chain faced were Fluctuation in market prices, Failing in assessment of demand, Timely supply, high cost of transportation facility and hence they expected Adequate physical facilities, Proper planning in assessment of demand, Timely supply of produce, Less price fluctuation, Good transportation facility, Less physical loss of produce, Proper planning of procurement and Less competition to exist in the market

KEYWORDS: Marketing, Marketing Channel, Marketing Efficiency, Marketing Margin, Price Spread

INTRODUCTION

Vegetable based industries are the engine for economic growth and employment generation in rural areas, and they lay a solid foundation for the development of managerial capacity in the young and emerging entrepreneurs. There are many reasons for scarcity of food, one of which is food losses occurring throughout the supply chain from production, post-harvest, processing and marketing. The present share of Uttar Pradesh in total horticulture production of the country is approximately 26%. U.P. ranks third in fruits, second in vegetable and first in potato production among all states. The state has about 30.00 lac ha under various horticultural crops. Uttar Pradesh is the second largest producer of vegetables in the country after West Bengal. Productivity of vegetables is likely to increase to 18.09 MT/ha from 17.28 MT/ha during 2008-09 (Source: Statistical Magazine; Govt. of U.P.) (<http://upgov.nic.in>). The major vegetables grown in the Varanasi district are potato, onion, tomato, cabbage, cauliflower, brinjal, etc. Considerable scope exists for both domestic and export trade in fruits and vegetables in India. This will, however, only be achieved with improved distribution systems and processing of these highly perishable horticultural commodities. An efficient marketing system ensures higher levels of income for the farmers and widens the markets for the produce by taking them to remote corners of the country. Prices have to play an important role in economic planning. The market intermediaries play a vital role in price formulation, which in turn has a great bearing in the scale proceeds received by the producer-sellers. The intermediaries stored to various malpractices which aggravated the marketing problems, such as high commission charges, unauthorized deductions and lack of remunerative price for the produce, ultimately leading to increased price spread and reduced share of the product in consumer's rupee. Redesigning the supply chain from seed bed to consumer plate is the need of the hour. By checking losses through reducing multiple, handling of fresh produce and adding value at producer's end by sorting, grading, waxing, pre-cooling and improving storage, packaging and transportation systems, better economic returns to the growers can be ensured. The knowledge about post harvest losses and marketing of vegetables will help in the process of proper planning for procurement, export and import of vegetables. This will also help in increasing the share of producer in the price paid by the consumer. Objective: To identify the different marketing channels and work out the marketing efficiency of each channel involved in marketing of vegetables, and to find out the problem/constraints in vegetable marketing faced by the different marketing functionaries in supply chain. Hugar and Hiremath (1984) studied the efficiency of alternative channels in marketing of vegetables in Belgaum city of Karnataka state, found that the price spread in the case of cabbage (48.31%) and brinjal (52.79%) were lower when sold through co-operative society, as compared to 50.29 and 24.74 per cent, respectively when sold through commission agents. Thus, it was obvious, that the net price received by the producer was observed to be higher from cabbage (57.69%) and brinjal (47.21%) when sold through the co-operative society as compared to 49.72 and 45.26 per cent, respectively when sold through the commission agents. Pokharkar *et al.* (1994) studied the economics of production and marketing of onion in Western Maharashtra and found that per hectare profit over cost A was Rs. 6178.23 with cost of cultivation of Rs. 11134.94 at 10.38 quintals of yield.

METHODOLOGY

To study the objectives, the data were collected by personal interview from Whole saler, retailer, market intermediary and farmers of Varanasi district. Multi stage simple random sampling technique was adopted for the selection of respondents. Data has been collected both from farmers and marketing functionaries. Multistage sampling design is used for sampling procedure. Varanasi district is selected purposively for present study. It is so because Varanasi district is one of the major vegetable growing district of Uttar Pradesh. Harahua block is selected randomly by using simple random

sampling technique. Four villages namely Lamahi, Adampur, Fakirpur and Aude from Harahua block were selected randomly.

Marketing Channels

The most common marketing channels engaged in the marketing of vegetables in varanasi district are following: Producers-consumers, Producers-retailers-consumers, Producers-wholesalers-retailers-consumers, producers-commission,agent/arhatiya, retailers-consumers

The constraints in vegetable marketing faced by vegetable growers will be analysed by the Garettee's ranking method and principal component analysis method.

Marketing Margins

Absolute Margin

$$A_{mi} = P_{Ri} - (P_{Pi} + C_{mi})$$

Price spread

$$Ps = \frac{\text{Absolute Margin}}{\text{Consumers Price}} \times 100$$

Where, P_s = Producer's/intermediaries' share in consumer's rupee.

Marketing Efficiency

Marketing efficiency was calculated using Shepherd's approach. It can be given as- M.E. = $C_p / (P_c + C + A_{mi})$

Where, M.E. = Market efficiency

C_p = Consumer's purchase price

P_c = Marketing cost of producer

C = Marketing cost of all the intermediaries involved in the channel

A_{mi} = Market margin of the intermediaries involved in the channel

Marketing Efficiency

Marketing efficiency of any activity or process is defined as the ratio of output and input.

Marketable Surplus

Marketable surplus is calculated by using following formula.

$$MS = P - C$$

Where, MS = Marketable surplus

P = Total production

C = Total requirement (Home consumption, Seed requirement, for gifts, Payment to labours, for social and religious work, and others)

Marketing Cost

Marketing cost can be calculated by using following formula

$$TC_{MKT} = C_{pm} + Mc_i$$

Where, TC_{MKT} = Total cost of marketing

C_{pm} = Cost borne by the vegetable producer in the marketing the produce.

M = The marketing cost incurred by i^{th} middlemen.

The Absolute Margin of Middleman

It can be calculated by the following formula.

$$AMP = SPP - (PPP + MC)$$

Where, AMP = the absolute margin of the middlemen

SPP = the selling price of middlemen

PPP = Purchase price of middlemen

MC = Marketing cost of middlemen

Marketing Efficiency

Marketing efficiency of any activity or process is defined as the ratio of output and input.

$$E = O/I \times 100$$

Where, E = Marketing efficiency

O = Output

I = Input

Gareette's Ranking for Constraints.

Garrett ranking- rank based on percentage

$$\text{Percent position} = (R_{ij} - 0.5)/N_j \times 100$$

R =Rank for i^{th} variable by j^{th} respondent

N_j = No. Of respondents

Convert percent position into value score by using garrett's table.

RESULTS

Marketing cost, marketing margin and marketing efficiency of different vegetable in existing marketing channel

Marketing Cost, Marketing Margin and Marketing Efficiency of Brinjal

Table 1: Marketing Costs, Margins and Efficiency in Different Channels of Brinjal

S. No.	Particulars	Channel I	Channel II	Channel III	Channel IV
	Farmer's Price (Rs./qtl)	567	567	567	567
	Marketing Cost (Rs./qtl)				
1	producer's loading & unloading charges	20	20	20	20
	T Transportation	30	30	30	30
	O Others	50	50	50	50
	V sub total	100	100	100	100
2	commission agent/Arhatia commission (6%)	--	--	--	34
	sub total				
3	wholesaler grading & Packaging	--		48.67	
	loading charges	--		20	
	commission Charges	--		20	
	T transportation	--		30	
	market fee	--		6	
	S sub Total			124.67	
4	Retailer Weighing Charges	-	46.25	46.25	46.25
	Packing	-	100	100	100
	Market fee	-	6.0	6.0	6.0
	sub total		152.25	152.25	152.25
	grand total	100	252.25	376.92	186.25
5	consumer's Price	850	1000	1200	920
6	marketing Efficiency	8.500	2.758	1.875	6.865

Table 2: Marketing Cost, Marketing Margin, Price Spread and Marketing Efficiency under Different Channels in Brinjal

Particulars	Channel I	Channel II	Channel III	Channel IV
P price received by producer	567	567	567	567
marketing Cost incurred by:				
producer	100	Nil	Nil	100
commission agent/arhatia			-	-
wholesaler			124.67	-
retailer		152.25	152.25	-
retailer (local market)	-	-		-
sub total	100	152.25	276.92	100
marketing Margin of				
commission agent			-	34
wholesaler			85	-
retailer		216	278	
retailer (local market)	-	-		-
sub total		216	363	34
total	100	368.25	639.92	134
price paid by consumers	850	1000	1200	920
price Spread		21.6	30.25	3.69
marketing Efficiency %	8.500	2.758	1.875	6.865

Marketing efficiency has been worked out and presented in Table 8 for brinjal. The total marketing cost and marketing margin involved in channel-I was Rs.100, Rs.368.25 in channel-II, Rs.639.92 in channel-III and Rs.134 in channel-IV. Since the marketing cost and marketing margin in channel-III was higher, the marketing efficiency was very low for channel-III. For channel-I, because of saving of marketing cost due to absence of market intermediaries and relatively low consumer's price, the marketing efficiency was higher. It was highest for channel-I i.e. 8.500% and lowest in channel-III i.e. 1.875%.Thus channel-I is more efficient than all other channel of marketing of vegetables. The similar

marketing efficiency was found by Pandey *et al.*(2008) in case of sweet orange.

Marketing Cost, Marketing Margin and Marketing Efficiency of Tomato

Table 3: Marketing Costs, Margins and Efficiency in Different Channels of Tomato

S. No.	Particulars	Channel I	Channel II	Channel III	Channel IV
	farmer's Price (Rs./qtl)	897	897	897	897
	marketing Cost (Rs./qtl)				
1	<i>producer's</i> loading unloading charges	20	20	20	20
	transportation	30	30	30	30
	others	50	50	50	50
	sub total	100	100	100	100
2	<i>commission agent/Arhatia</i> commission	--	--	--	54
	sub total				54
3	<i>wholesaler</i> grading & Packaging	--		48.67	
	loading charges	--		20	
	commission Charges	--		20	
	transportation	--		30	
	market fee	--		6	
	sub Total			124.67	
4	<i>retailer</i> weighing Charges	-	46.25	46.25	46.25
	packing	-	100	100	100
	market fee	-	6.0	6.0	6.0
	sub total		152.25	152.25	152.25
	grand total	100	252.25	376.92	206.25
5	consumer's Price	1630	1880	2000	1710
6	marketing Efficiency	16.30	4.030	2.735	11.10

Table 4: Marketing Cost, Marketing Margin, Price Spread and Marketing Efficiency under Different Channels in Tomato

Particulars	Channel-I	Channel-II	Channel-III	Channel-IV
price received by producer	897	897	897	897
Marketing Cost Incurred by:				
producer	100	Nil	Nil	100
commission agent			-	-
wholesaler			124.67	-
retailer		152.25	152.25	-
retailer (local market)	-	-		-
sub total	100	152.25	276.92	100
Marketing Margin of :				
commission agent			-	54
wholesaler			102.10	-
retailer		314.17	352.17	
retailer (local market)	-	-		-
sub total		314.17	454.27	54
total(MC+MM)	100	466.42	731.19	154
price paid by consumers	1630	1880	2000	1710
price Spread		16.71	22.71	3.15
marketing Efficiency %	16.30	4.030	2.735	11.10

Marketing efficiency has been worked out and presented in Table for tomato. The total marketing cost and marketing margin involved in channel-I was Rs.100, Rs.466.42 in channel-II, Rs.731.19 in channel-III and Rs.154 in channel-IV. Since the marketing cost and marketing margin in channel-III was higher, the marketing efficiency was very low for channel-III. For channel-I, because of saving of marketing cost due to absence of market intermediaries and relatively low consumer's price, the marketing efficiency was higher. It was highest for channel-I i.e. 16.30% and lowest in channel-III i.e. 2.735%. Thus channel-I is more efficient than all other channel of marketing of vegetables.

Table 5: Marketing Cost, Marketing margin, Price Spread and Marketing Efficiency under Different Channels

Particulars	Channel-I	Channel-II	Channel-III	Channel-IV
price received by producer	453	453	453	453
marketing Cost incurred by				
producer	100	Nil	Nil	100
commission agent/arhatia			-	-
wholesaler			124.67	-
retailer		152.25	152.25	-
retailer (local market)	-	-	-	
sub total	100	152.25	276.92	100
marketing Margin of :				
commission agent			-	27
wholesaler			72	-
retailer		181	240	
retailer (local market)	-	-	-	
sub total		181	312	27
total(MC+MM)	100	333.25	588.92	127
price paid by consumers	600	725	875	650
price Spread		24.96	35.65	4.15
marketing Efficiency %	6.000	2.17	1.48	5.11

Marketing efficiency has been worked out and presented in table 12 for cabbage. The total marketing cost and marketing margin involved in channel-I was Rs.100, Rs.333.25 in channel-II, Rs.588.92 in channel-III and Rs.127 in channel-IV. Since the marketing cost and marketing margin in channel-III was higher, the marketing efficiency was very low for channel-III. For channel-I, because of saving of marketing cost due to absence of market intermediaries and relatively low consumer's price, the marketing efficiency was higher. It was highest for channel-I i.e. 6.000% and lowest in channel-III i.e. 1.48%. Thus channel-I is more efficient than all other channel of marketing of vegetables.

Problems Faced by Producers, Retailers and Wholesalers in the Vegetable Supply Chain

Table 6: Constraints Faced by Market Functionaries in Production and Marketing of Vegetables

S. No.	Constraints	Producer (N=30)	Wholesaler (N=15)	Retailer (N=15)
I. I. Production Constraints				
1	non availability of planting martial in time	8(26.33)	---	---
2	non availability of high yielding variety.	3(10.00)	---	---
3	non availability of fertilizer in time	17(56.66)	---	---
4	lack of irrigation facilities	13(43.33)	---	---
5	non availability of labour in time	17(56.66)	---	---
6	others		---	---
	a)high cost of labour supply	27(90.00)	---	---
II. Marketing problems				
1.	lack of transportation facilities	3(10.00)	1(3.33)	2(6.66)
2.	high cost of transportation	25(83.33)	15(50.00)	13(86.66)
3.	fluctuation in market prices	30(100.00)	15(100.00)	15(100.00)
4.	distant market	15(50.00)	0(00.00)	5(33.33)

Table 6 – Cond.,				
5.	lack of grading and packaging	26(86.66)	7((46.66)	8(53.33)
6.	lack of storage facilities	27(90.00)	4(26.66)	6(40.00)
7.	un-even payment for sale after sale	18(60.00)	4(26.66)	0(0.00)
8.	lack of market information	14(46.66)	4(26.66)	11(73.33)
9.	lack of financial assistance from any company	14(46.66)	11(73.33)	12(80.00)
	timely supply	---	15(100.00)	15(100.00)
	falling in assessment of demand	15(100.00)	15(100.00)	15(100.00)
III. Economic constraints				
1.	high cost of planting material	2(6.66)	---	---
2.	high cost of transport in planting material	4(13.33)	---	---
3.	high cost of pesticides	24(80.00)	---	---
4.	high cost of labour	27(90.00)	4(26.66)	17(56.66)
5.	non-availability of credit in time	8(26.66)	2(13.33)	12(40.00)
6.	In In-adequate credit facility	2(6.66)	3(20.00)	6(40.00)
7.	high cost of barrowing	7(23.33)	1(6.66)	2(13.33)

Problems Faced by Producers in Marketing of the Vegetables

Table 06 depicts that problems faced by farmers in marketing of vegetables to different formats in the supply chain. Major problems faced by farmers was fluctuation in market prices (100.00%), Failing in assessment of demand (100.00%), lack of storage facilities (90.00%), high cost of labour (90.00%), lack of grading and packaging (86.66%), high cost of transportation facility (83.33%), high cost of pesticides (80.00%) and hence they expected that no malpractices should be followed at selling unit with proper regulation in the market, Good transportation facility, Good packing facility, Good storage facility and the minor problems they faced was Lack of market information (46.66%), Lack of financial assistance from any company (46.66%), non availability of credit in time (26.66%), high cost of borrowing (23.33%) for the respective problems they expected Market information at right time, Providing financial assistance from companies, Nearness of selling unit/place, Cold shelf facilities during storage of produce and getting contracting arrangements from agencies.

Problems Faced by Wholesalers in Marketing of the Vegetables

In the vegetable supply chain the major problems faced by wholesalers were fluctuation in market prices (100.00%), failing in assessment of demand (100.00%), Timely supply (100.00%), lack of financial assistance from any company (73.33%) and hence they expected Providing financial assistance from companies should be followed by buyers with proper regulation in the market. The minor problems the wholesalers faced were lack of grading and packaging (46.66%), Lack of market information (40.00%), Lack of storage facility (26.66%), un even payment of sale (26.66%), Lack of transportation facility (3.33%). For the respective problems it was expected that good transportation facility, Market information at right time, getting contracting arrangements from agencies, Good packing facility and Nearness of selling unit/place should be made for better benefits to them.

CONCLUSIONS

The study of different marketing channels revealed that as the number of middlemen in marketing channel increases, the marketing efficiency of the produce is decreases due to increase in marketing cost and margin. There will be an ample scope for farmers to sell their produce effectively if the number of middlemen in marketing channel is less. The study resulted that marketing efficiency is high in all cases when marketing channel is short and vice-versa. Problems faced

by producers as well as different market intermediaries are: Production problem, Economic problem, Marketing problem, Miscellaneous problem. Major problems faced by farmers and other market intermediaries were fluctuation in market prices, Failing in assessment of demand , lack of storage facilities, high cost of labour, lack of grading and packaging, high cost of transportation facility, high cost of pesticides etc.

Problems Faced by Retailers in Marketing of the Vegetables

The problems faced by retail outlets under different formats in marketing of vegetables in the supply chain are listed in Table 06 . In the study, major problems the retail outlet in the vegetable supply chain faced were Fluctuation in market prices (100.00%), Failing in assessment of demand (100.00%) Timely supply (100.00%), high cost of transportation facility (86.66%) and hence they expected Adequate physical facilities, Proper planning in assessment of demand, Timely supply of produce, Less price fluctuation, Good transportation facility, Less physical loss of produce, Proper planning of procurement and Less competition to exist in the market.

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